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No. 5.—Vol. 2.

MARCH, 1906.

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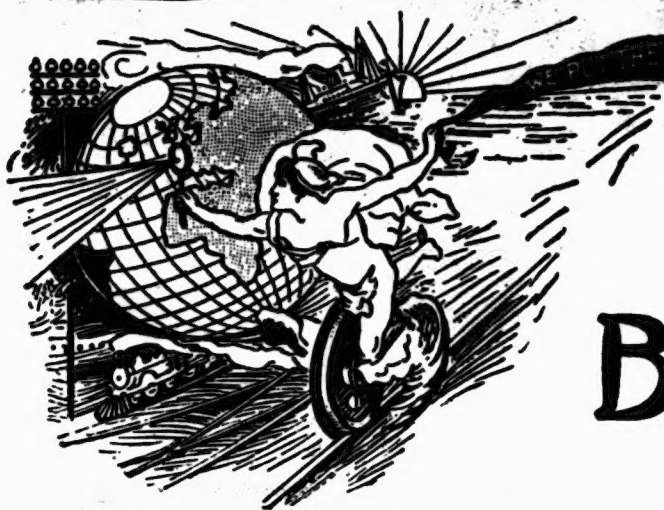
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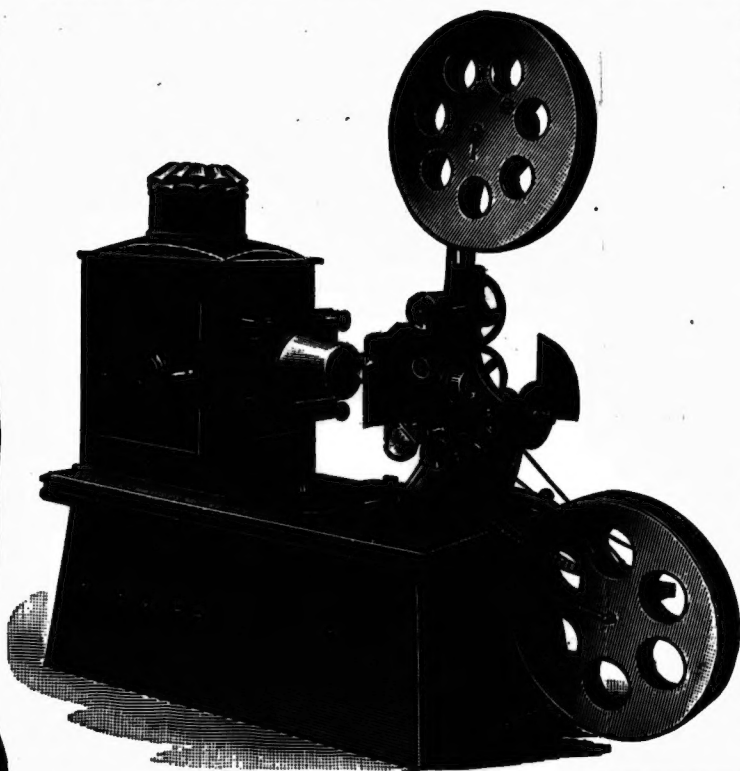
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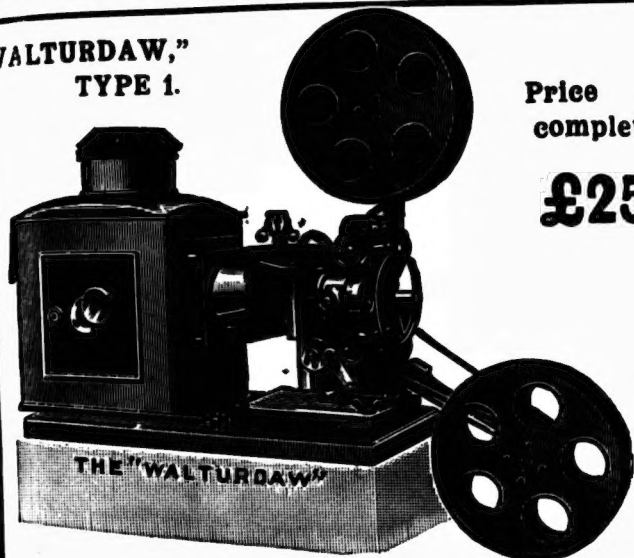
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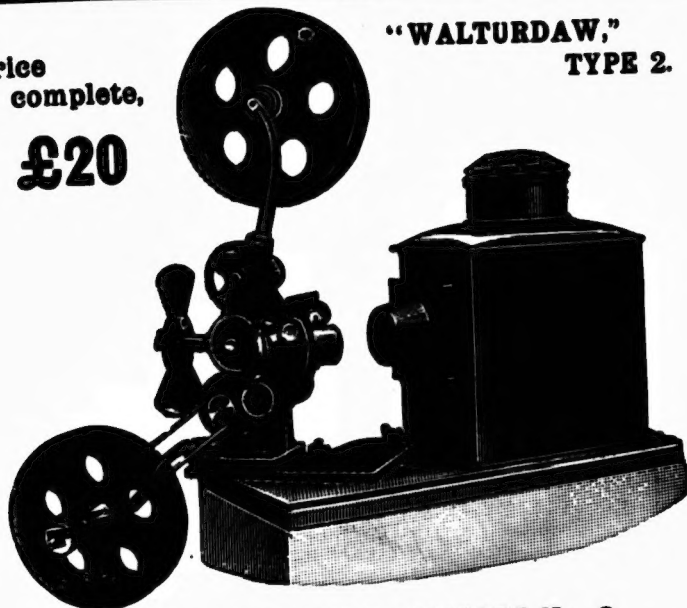


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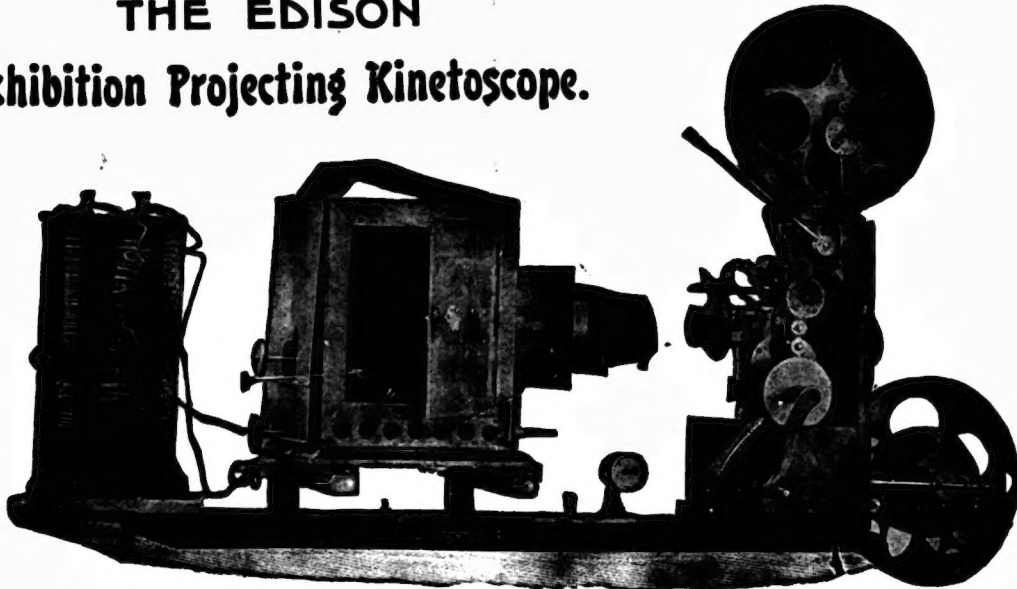
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THE TRAIN WRECKERS. A great film, showing the attempt of train wreckers to wreck a railroad train. Signalman's daughter saves train from destruction, wreckers escaping on an inspection car. They are caught by engineers on a locomotive and killed. This picture is absolutely perfect as to detail, action, and photographic quality, and includes features which certainly are new departures in moving pictures. **Length 315 feet.**

THE MILLER'S DAUGHTER. An interesting story in seventeen scenes. Perfect quality, and exceptionally beautiful tints. **Length 975 feet.**

DOWN ON THE FARM. Girls have fun on the farm, raid an orchard to steal fruit, and are chased by the farmers. **Length 440 feet.**

THE WATERMELON PATCH. This film depicts a raid by darkies on a watermelon plantation in the Southern States. Brimful of humour from beginning to end. All of the watermelon thieves are genuine negroes, and the action throughout the entire picture, as well as the photographic quality, are all that can be desired. **Length 725 feet.**

POOR ALGY. Our latest comic, showing the misfortunes which befall Algy, while enjoying a picnic with his best girl. **Length 315 feet.**

THE WHITE CAPS. We have portrayed in a most vivid and realistic manner the methods employed by the "White Caps" of the Western American States, to rid the community of undesirable citizens. As a soul stirring melodramatic production, it is the finest picture we have offered to our customers, while the photographic quality and the beautiful moonlight effects must be seen to be appreciated. **Length 335 feet.**

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The Optical Lantern & Cinematograph Journal.

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THE promoters of the French Motor Grand Prix are showing unprecedented wisdom in choosing the cinematograph as a peace maker. The populace of the Sarthe circuit are having the news that the race is to be held in their midst gently broken to them. M. Georges Durand, a member of the French Automobile Club, is holding a series of popular cinematograph lectures, illustrative of a big motor contest, in all the villages comprised in the race circuit. It is thought that this diplomatic step will allay local irritation and reduce the number of broken bottles and nails which are usually placed on the road.



THE L.C.C. has again gone out of its way to find another sinecure for an official

and spend more of the ratepayers' money. Not content with the glory obtained by the Thames Fleet, they are looking round for more trouble by dabbling in other mechanical matters of which they know practically nothing. The Theatres and Music Halls Committee recently brought up recommendations to the effect that, on and after April 1, the chief officer of the Fire Brigade should be responsible to the Council for the inspection of the electric lighting installations and heating and other mechanical arrangements of theatres and other places of public entertainment licensed by the Council, and that for the purpose an electrical and mechanical engineer, at a salary of £400 a year, and an electrical engineer, at a salary of £200 a year, be appointed in the brigade. They could not of thought of a more suitable date to start the appointment.

WE have many times suggested that an inventor who could simplify the mechanism so that living pictures could be easily produced in the home would find a profitable result to his labours. It has been a matter of gradual development, but the market is showing that endeavours are being made to bring the question to a practical solution. The German-made oil lantern with its clumsy band of highly coloured gelatine pictures took the place of the Zoetrope and later the Kinora, both of which had as objects the production of moving pictures for amusement; but something seemed wanting in each to make them as popular, for instance, as the phonograph has become for home amusement. Those who saw the first talking machine which Edison sent into this country, and I was lucky enough to see and use it, will remember what a huge and cumbersome contrivance it was with its imperfect records on tinfoil. We little anticipated that it was the forerunner of the present elegant and perfect sound production instrument which is to be found in the homes of both rich and poor, and which brings to the home the voices, etc., of the world's greatest artistes. The process of evolution during nearly twenty years has been interesting. Starting with the tinfoil, which of course could not be preserved, an improvement was made by using a cylinder of wax, which again was improved by the addition of a hardening material. Duplicating the records was done by a process of re-cutting until matrix making and moulding came into existence, and these greatly added to the charm and life of the records. Discs of shellac and lampblack were another advance, and hardly a year has passed since the talking machine came into existence but that wonderful additions have been made towards perfection, in both the records and the various parts of the apparatus.



AND so it will be with the living picture industry, judging by the steps we see in various directions at the time of writing. Like the phonograph it is a case of building up ideas and improving on suggestions that arise whilst working with the present apparatus. Already three inventions have

been brought to our notice, which should be in the hands of dealers ready for the winter season's market, and which doubtless will originate improved ideas for more advanced contrivances until perfection is ultimately reached. It is gratifying that our own countrymen are taking a leading part in producing suitable apparatus, but they must hurry along if they are to capture the market. Already on the continent and in America the manufacturers are keenly alive to the fact that the first in the field will score the heaviest, and we hear it will not be long before each will put on the market something quite new for home use. Let this fact stir up our own people to greater effort, so that it may not again be said we are behind both countries in the question of living pictures.



WHILST on the subject of foreign enterprise we cannot do better than refer to a matter which is frequently brought to our notice. It is the difference in the policies of manufacturers in this country compared with those in other parts. Over here independence seems to be one of the chief qualifications, and a qualification which is leading to disaster as far as finding new channels and larger spheres in which to place the particular goods made by English firms is concerned. Reluctance to give information, and an apparent desire to give an air of mystery to new products or improvements frightens the would-be purchasers, and yet the salesmen seem to have been educated for this particular purpose. Not only, however, is this very noticeable in the optical lantern trade, but time after time we have seen an obvious desire to keep new goods hidden from those who might be purchasers. Firms have been asked if they would care to have certain articles reviewed in the columns of useful journals, and although the correspondents only needed information it has been refused with a reticence most difficult to comprehend, compared with the eagerness shown for publicity in other trades. "What need have we to advertise?" has been the remark of firms who have produced new inventions or improvements. "If customers require our particular articles they can obtain them from us, as



we have patented and protected them," and they retire to their private offices convinced that they have been particularly smart in keeping the fact from the public that they have on sale something they might require. Again, if they subscribe to their trade journal, it is only by force of necessity and not with the idea of gaining knowledge.



How different we find traders in other parts. Their eagerness to do business and obtain knowledge of the best markets is frequently shown by correspondence they forward to us. In some cases, not knowing the subscription to the journal, they send along an amount to be placed to their credit, and instructions for copies to be forwarded until the amount is exhausted. They post enquiries to the advertisers or correspondents, and although the magazine may be in a foreign tongue, they have the articles translated in order that they may be right on the spot regarding what is going on in their own trade in England. Only a day or two ago one of our advertisers, in the course of conversation, suggested that it would not pay him to remove his advertisement owing to the large number of foreign enquiries he received. This in itself is gratifying to us; but at the same time it makes us feel that the trade over here is not fully alive to what is best for its own interests, and the sooner the English trader or manufacturer understands that he need take every advantage offered for improving his knowledge, making more widely known his products, and coming more out of his hermit like shell, the better it will be for himself and the trade. He must hustle, and take a lesson out of the custom of other countries. Not even tariff reform would help to safeguard his interests unless he takes a greater initiative in popularising his trade and his particular goods. Our belief is that the more judicious publicity he can obtain the better his prospects will be.



It is not often we have brought to our notice, in cold print, a daring incentive to

duplicate films, but a book has been forwarded to us on "519 Ways of Making Money," and one of the items given relates to cinematograph entertainments, in which the writer says:—"The demand for this class of entertainment is so great that the possessor of several of these machines could be sure of them being in constant requisition. The opportunity afforded for duplicating the original photographs immensely reduces the working costs, and places him in the position of being able to secure handsome profits." Now ye scene shifters, supers, office boys, and bricklayers, hurry along and duplicate! Carnegie's millions will be nothing to your piles. The only trouble soon will be to find something original to duplicate.

The Operator's Vade Mecum.

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COMPARISON OF LIMELIGHT JETS.

By J. HAY TAYLOR.

IN last issue Mr. Griffiths Jones asks for details of a meeting held some years ago in London at which a number of limelight jets were submitted for comparison. To ascertain which of the numerous jets gave the most light, irrespective of other conditions, would have been a very simple matter, and could be arrived at by projecting the light from two and then discerning the inferior, allowing its place to be taken by the next and again comparing, and so on until the last jet was reached. In the case alluded to, however, the jets had nipples of various sizes, consequently consumed gas in varying quantities from five to twenty feet per hour, and what had to be arrived at was, which jet gave the most satisfactory light with the minimum consumption of gas.

On looking through my notes made at the time I find that there was quite a wordy war on the part of those who had submitted the jets to the judges—one meant one thing and others thought he meant something else, and so on.

However, after much trouble, a decision was arrived at, but in order that no unpleasantness might result, the names of the owners or makers were suppressed, and each jet was referred to by its number only.

The particular mixed jet which gave the most light was one provided with a large bore and consumed about seventeen feet of oxygen per hour. It was specially interesting to compare this with the ether saturator jet which had a very small bore and consumed about four feet of oxygen per hour, inasmuch as the powerful jet alluded to with its great consumption of gas, only gave four times as much light as the ether saturator jet with its small consumption of gas.

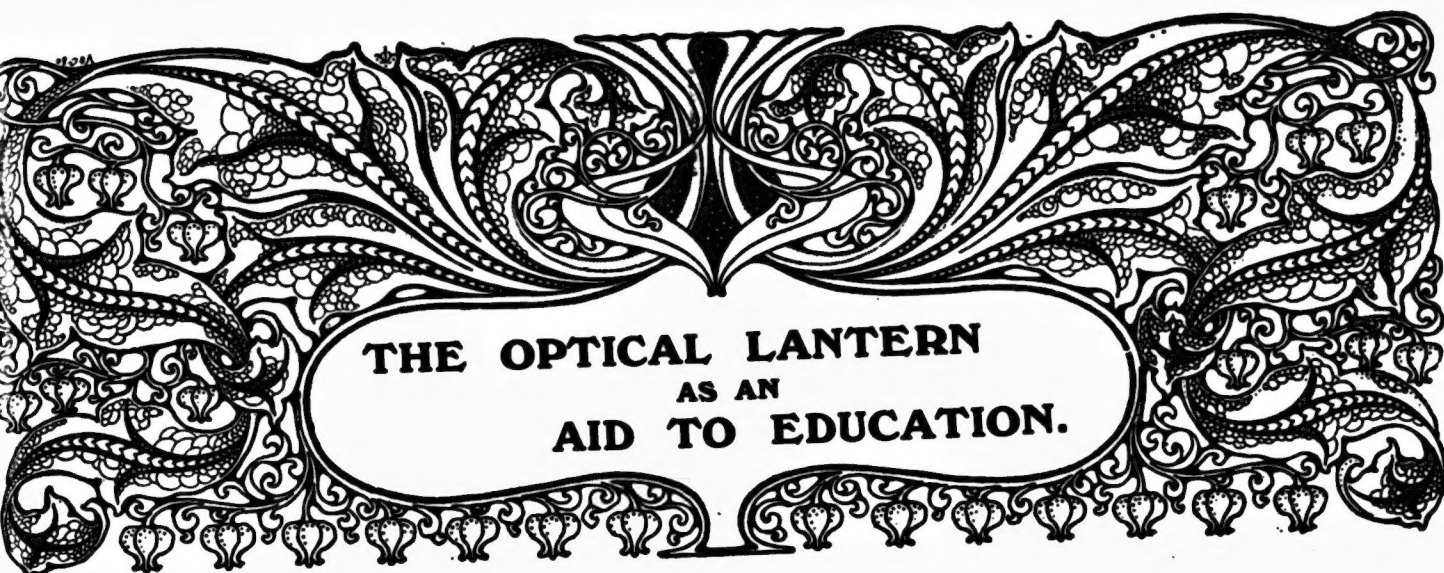
The following are the full details arrived at by the judges:—

Order	Jet	Cubic feet of gas consumed per hour			Relation of illumination in terms of				
		Coal	Gas	Oxygen	The Less	The Greater	No. 3	No. 8	No. 5
A	1	6.50		7.23	1.00	.75	.75	.74	.44
	3	7.60		9.15	1.34	1.00			
B	2	5.50		6.40	1.00	.99	.99	.98	.58
	3	5.80		9.60	1.11	1.00			
C	8	7.80		8.32	1.21	1.00			
	3	8.00		8.64	1.00	.99		.99	.59
D	8	9.58		9.60	1.51	1.00			
	4	7.60		9.34	1.00	.66		.66	.40
E	8	9.87		9.60	2.15	1.00			
	11	5.75		5.28	1.00	.46		.46	.28
F	8	10.25		*	1.00	.60			.60
	5	9.66		*	1.65	1.00			
G	7	9.77		*	1.00	.72			.72
	5	9.50		*	1.38	1.00			
H	9	6.40		6.18	1.00	.38			.38
	5	10.00		*	2.66	1.00			
I	12	10.00		*	1.00	.95			.95
	5	10.00		*	1.05	1.00			
J	6	5.83		6.01	1.00	.54			.54
	5	10.00		*	1.85	1.00			
K	5	10.25		*	2.50	1.00			
	6	6.00		5.50	1.00	.40			.40
L	5	10.25		*	3.90	1.00			1.00
	10	Ether		4.16	1.00	.26			.26

Results arranged in the order of illuminating power.

No. of Jet	Ratio	Oxygen	Coal Gas
5	1.00	*	10.25
12	.95	*	10.00
7	.72	*	9.77
8	.60	*	10.25
3	.59	8.64	8.00
2	.58	6.40	5.50
6	.54	6.01	5.83
1	.44	7.23	6.50
6	.40	5.50	6.00
4	.40	9.34	7.60
9	.38	6.18	6.40
11	.28	5.28	5.75
10	.26	4.16	Ether

* Denotes more than 10-ft. of gas per hour.



THE OPTICAL LANTERN AS AN AID TO EDUCATION.

No. II.

By J. A. WATERSTON.

LAST month I dealt with the use made of the lantern by the evening and day schools of the L.C.C. An addition has now been made to their repertoire by slides representing objects in the British Museum, which are available on loan to all the Council's schools. From the example set by our leading educational authority, private schools, girls' high schools, kindergartens, and colleges, should take a lesson, and who can bring that lesson home to them better than the manufacturers, who, take things too easily, and blame bad trade instead of their own inaction. Very few of these embrace the opportunity of pleasantly and permanently imparting knowledge by the use of the lantern. Want of information as to expense, and in many cases utter ignorance that educational subjects of high merit have been prepared are too general. In one or two schools I find a lantern show has been given at the end of the term, instead of prizes, but no serious attempt has been made to consider the lantern as part of the scheme for imparting instruction or to use it to illustrate and explain history, geography, natural history, etc. What a boon it would be to the scholars to obtain the relief thus offered from the meaningless jumble of dates, figures, and names with which they have to cram their brains, and how much more likely are the lessons to be fixed on their

minds. It is well-established that the young learn more readily through the sense of sight than through the ears—take, as example, the eagerness with which the object lesson is looked forward to as a relief from tedious lessons. How much more would relief be found in a good optical lantern show? Manufacturers should issue lists of lanterns and slides suitable for schools, and, by attractive literature, explain the simplicity of their use to likely buyers. Much could be done in this direction, and both the trade and education would vastly benefit.

TECHNOLOGICAL LANTERN SLIDES.

The teaching of technology, whether mechanical, electrical, chemical, or optical, will always present varying degrees of difficulty to the teacher. The problem of how best to impart knowledge to a class composed of so many different varieties of intellectual capacity will never be worked out to "Q.E.D."

The most successful teacher is probably the one who does not keep to the well-trodden highway of demonstration by using purchased apparatus in the stereotyped manner. The man who takes a delight in making, and often inventing his experimental apparatus, is the more likely to succeed. Such a one is so intimate with his subject, and his enthusiasm is so infectious, that serious students are irresistibly carried forward to success.

The Northampton Institute is a typical example of what is best in our technical educational institutes. Here, classes in all the sciences enumerated above are held daily. The Principal, R. Mullineux Walmsley, Esq., D.Sc., F.R.S.E., etc., has gathered about him a virile staff of heads of departments, assistants, etc., who take a personal interest in the success of the Institute.

It is most interesting to find that the thousands of lantern slides used at the Northampton Institute are all made on the premises, and are of such a unique character that few similar ones could be purchased.

In reply to a question as to the difficulty of providing a sufficiency of light to take notes during an optical lantern demonstration, Dr. Walmsley explained that they had a special system of lighting which worked admirably, and, on subsequent inspection of the spacious lecture room, this was found to be the case. The lights in the students' gallery are so placed as not to interfere with the clearness of projection.

The Principal gave the following reasons for using such a multiplicity of lantern slides in the class work: (1) The inconvenience of frequently changing diagrams; (2) the amount of storage room which they would require; and (3) the great temptation there would be to use an out-of-date diagram to save the trouble caused by purchasing or making a new one. On the other hand, lantern slides can be made daily if necessary, and all the slides exhibited are carefully revised or renewed as required, and take up comparatively little space.

The technical optical department has become a most important section of the Institute technological work, and is under the care of Mr. S. D. Chalmers. This gentleman accompanied the writer on a visit to the optical laboratories, which are equipped in the most perfect fashion with modern apparatus.

A few of the many appliances may be mentioned, viz., a Beck lens-testing bench; the Abbé focometer, spherometer, spectrometer, etc.; a 5-inch transit theodolite; a whole plate camera; a 10 × 14-in. process camera; microscopes of all kinds, and many other high class instruments of the most improved type.

Theory is supplemented by practical instruction in the optical workshop, even to the actual making of lenses, for which latter purpose the services of a professional glassworker are retained.

Mr. Chalmers has many special points which he would prefer to illustrate in his lectures with the aid of the kinematograph. He pointed out that, even in his own department, hundreds of films might be required if an attempt were made to introduce moving pictures generally throughout the Institute. In his actual practice Mr. Chalmers makes a rough sketch on the blackboard whilst lecturing, and then puts a slide on the sheet representing more fully what he has sketched.

The Northampton Institute professors and instructors are past masters in the art of designing and making "home-made" apparatus, and many well-finished specimens of craftsmanship are to be seen, and a description of these alone would make an interesting chapter.

In his interview with the leaders of various institutions, the writer was struck with the fact that they were seldom approached by the manufacturers regarding the possibilities of the living picture projection apparatus as a useful adjunct to their organisation. Fears of expense, lack of information as to suitable apparatus and films, and a feeling that the kinematograph was out of the range of possibilities in consequence of its danger, intricacy, and expense, were the burden of the remarks made. This seemed to show that if only the manufacturers would realise this new field for their wares, and would cultivate and interest the professorial world, much good would result, not only to the trade, but to all interested.

ORDINARY PHOTOGRAPHY INSUFFICIENT.

Ordinary photography has its limitations. Even with a quickly taken series of pictures it is not possible to always get the desired particular, characteristic position of the animate object under observation. Days of trial may pass without the wished for result.

It is this drawback which has led a few of our leading scientists to use the kinematograph to assist them in their studies of animal, insect, and plant life, and also

to apply it to microscopical investigation and the study of physical phenomena, but up to the present only the fringe of possibilities has been touched.

It seems strange that no means has been found to bring into every-day use, at our science schools, the series of films produced by the "Urban-Duncan Micro-Bioscope," with their copyrighted title, "The Unseen World," which embraces such diverse subjects as "Electrical Discharges," "Birth of a Crystal," "Smoke and its Molecule," "American Blight to Green-fly," "Cheese-mites," "Red-Snow Germs," "The Circulation of Protoplasm in the Waterweed," "Circulation of Blood in a Frog's Foot," "Typhoid Bacteria," "Diatoms," "The Active Water Flea," and scores of others.

Slides will never be totally eclipsed by the cinematograph, and a lecturer, who knows his business, combines the two most effectively, and only uses the one lantern. He says little or nothing during the time pictures are moving, but reserves his eloquence for the periods of stationary projection.

We have a national library of phonograph records, which will hand down to posterity reproductions of the oratory and vocalisation of our great speakers and singers. How much more interesting would be a similar library of lantern slides and films?

If Sir Benjamin Stone could be prevailed upon to allow his unrivalled collection of photographs of people, old customs, etc., to be reduced into lantern slides, others, no doubt, would contribute slides and films of equal historical value.

There is absolutely no limit to the versatility of the cinematograph. Do you wish to emigrate, you can learn how the different Colonial industries are carried on, whilst sitting in a chair. You may view the changing scenery, and be shown the daily life of the colonist from sunrise to sunset before deciding to expatriate yourself. Would you like to see the Falls of Niagara, or visit the Pyramids, they are unfolded before you. Possibilities undreamed of a few years ago are now

the portion of the man who cannot or will not travel. The moving panorama of the whole world is brought within his ken, and his education is in everyway simplified and amplified.

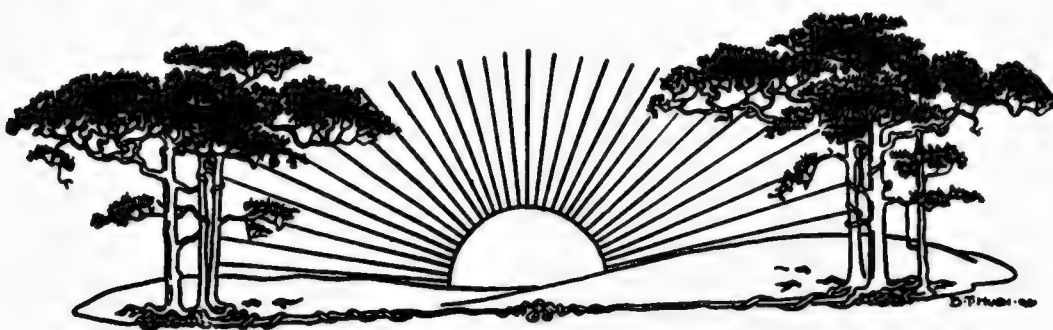
What variety entertainment is complete without its pictures in motion? It is being proved daily that a music hall audience (usually considered a most frivolous one) *likes* the films which educate.

THE ELECTION.

At the time of writing, the country is recovering from the excitement attendant on what will probably prove to be the most momentous election of modern national history. Our old friend, the optical lantern, and its first cousin, the cinematograph, have impartially helped either side. Hundreds of thousands have been able to obtain early news of election results, and, in the intervals of waiting, have been politically educated with slide and film. Each party has made strenuous efforts to get the first knowledge, and the waiting crowds have heartily appreciated the splendid results of this rivalry.

Very numerous, too, have been the political meetings assisted. The would-be M.P., who is "unaccustomed to public speaking," must bless the day in which optical projection was first put to political uses. The animated fiscal story has told its tale, and Fair Trade and Free Trade have each had their innings, and triumphed respectively according to the company they were in. Political cartoons from the comic and daily papers have been circulated as lantern slides in thousands, and even the most turbulent spirits have postponed their interruptions until the show was over.

In conclusion, as a purely personal view, it seems a great pity that the optical lantern and the cinematograph (the latter only a variation of the former) should not always be used together. The one is the complement of the other, making a complete and harmonious whole, and, for all educational purposes, unique in their perfect utility.



ROUND AND ABOUT.

Southampton

Is the place chosen for the twenty-first annual meeting of the Photographic Convention of the United Kingdom in July, and a most interesting programme has been arranged. Cinematography in colours will be shown, and Mr. F. Martin-Duncan is to lecture on "The Application of Cinematography to Natural Science."



The Optical Lantern—how to choose and use it

Is the title of a useful handbook, published at the price of twopence, by the United Kingdom Band of Hope Union. Amongst the information given is the buying of new and second-hand lanterns, with some very useful hints. The body, illuminants, operating, position, screen, size of picture, slides, are each dealt with in an able manner, and every amateur should obtain a copy of the unpretentious booklet.



In a Handbag!

Quite the latest thing in the quasi scientific world is wireless cinematography. It has occurred to a Dublin inventor that scene pictures as well as word waves might be transmitted in "Marconi" fashion. The inventor claims that his research has been successful to a highly gratifying degree, and that at his home in Dublin he has been able to receive impressions of scenes occurring in all parts of England. The apparatus by which these results are obtained is incredibly simple. An instrument so easily portable that it can be contained in a handbag is all that is necessary.—*Star*.



Mr. Arthur B. Malden

Has been much in demand this season with his successful cinematograph lectures. Not only in London, but in the Provinces, he has met big audiences who have been delighted with the interesting and at the same time educational feast he has provided. A well thought out combination of lecture, slides and living pictures proves a big attraction, and should revive the interest in the optical lantern as an entertainer.

The Chronophone on Tour.

A determined effort is now being made to put into practical shape the scheme to synchronise cinematograph pictures with the talking machine. For this purpose the well-known firm of publishers, Messrs. J. H. Iles & Co., have formed a syndicate to run a Provincial Company to exploit Gaumont's Chronophone Talking and Singing Pictures in certain Provincial towns. The tour commenced at Swindon on Monday, February 26th, when the pictures shown included representations and contributions by the following celebrated artistes: Mr. R. G. Knowles, Mr. Hamilton Hill (the Australian baritone), and Mr. Joe Mack (who sings "Angelina"). A crowded audience applauded the talking and singing pictures vociferously—in fact, so great was the demand for encores, that the operators often found it difficult to proceed with the next picture. Since the opening the booking has been excellent, and apparently a big future is in store for the wonderful invention.



Microscopic Photography.

The second in the series on "Advances in Microscopy," by Mr. J. W. Gordon, was delivered at the Royal Institution, the subject being "The Microscope adapted to Special Duty." The first topic was the much-discussed limit of visibility, from which it appears that objects such as a bacterium, or that minute appendage called a "flagellum" which many bacteria carry, can be seen, though attenuated, much beyond the point hitherto commonly supposed to be the inferior limit of microscopic vision. The lecturer then demonstrated the appliances employed in the metallographer's microscope to illuminate the surface of an opaque object, such as a polished slab of metal, describing particularly the construction of the vertical illuminator and the method of focussing. Another appliance for improving the resolving power was the apparatus for utilising ultra-violet light having a wave of about one ninety-thousandth part of an inch. The lecturer expressed the opinion that the principle exemplified by this invention might be usefully extended to instruments designed for working with monochromatic light within the range of the visible spectrum. The last matter dealt with was a photomicrographic apparatus to meet the requirements of practising engineers and doctors, which renders extremely simple the procedure adopted in the production of a photograph of a microscopic object. The camera consists of a small telescope

carrying a photographic plate. This is placed on the eyepiece of a microscope when it has been adjusted for correct visual focus, and yields a photographic picture of the object seen. A daylight charging and developing box makes a dark-room unnecessary, and the operation is thus rendered extremely simple. If high magnifying powers are required the camera must be used in connection with the high-power microscope fitted with an oscillating screen. By this arrangement the contrivance is equal to the production of photographs on the largest scale of magnification.



The Lantern Lectures

Of the month have been numerous, but there have been few with novel titles or of a new character. Dr. Stark used a fine set of slides to illustrate his lecture on Palestine, delivered at Edinburgh. Dr. H. R. Mill lectured on South Africa before the British Association, and specially delighted the audience with a very excellent set of pictures. Mr. Ellis Marsland used slides to illustrate the transition of the characteristic building of the Cotswold from its original simplicity to the Renaissance style. At a meeting of the photographic section of the Hampstead Scientific Society, Mr. Phillip H. Williams gave a lecture on "Architectural Photography," which was largely devoted to exterior and interior cathedral work. He spoke highly of the 5 in. by 4 in. Sanderson camera, which he used with excellent results for this particular work. About 50 slides were shown which were produced by the reducing camera. He found it far better not to use the whole of the slide, but only a small portion from the middle, as some of the lenses in lanterns did not give sharp images to the edges of the pictures on the screen.



A Successful Living Picture Lecture.

On the 20th February, Mr. Arthur B. Malden (of the Regent Street Polytechnic) a son and worthy successor of the well-known lecturer, Professor Benjamin I. Malden, delivered his cinematograph lecture "Paris—Modern and Historical, with visits to the Palaces of Versailles and Fontainebleau," at the Finsbury Park Congregational Church. The lecture was illustrated by a series of 100 very beautiful instantaneous photographic slides, and a number of very fine films, including "The Turbine Steamer Crossing the Channel from Newhaven to Dieppe," "The Electric," "Swing Bridge Across the Seine at Rouen," "Early Morning at the Paris Markets," "The Avenue de l'Opera," "A Corner of the Boulevard," "Parisian Firemen," "Panorama taken from a River Steamboat on the Seine," "The Lake in the Tuileries Gardens," "An Afternoon on the Champs Elysees," "A Military Display—Cavalry, Artillery, and Cyclist Corps," "The Return from the Grand Prix," "The Great Fountains at Versailles," "The Visit of the King of Spain," and a series of pictures representing "King Edward VII.'s Visit to President Loubet," and "Life on Board the Vessels of the

French Fleet." The animated pictures were excellent; some of them, such as the "Military Display with Cyclist Corps," being quite unique, and elicited hearty applause. Amongst the most realistic perhaps were the "Fountains at Versailles" in full play, the "Parisian Firemen," and the "Naval Drills and Sports on board the 'Massena,'" while of the photographic slides those representing the interiors of the picture galleries, churches, and palaces were deserving of special commendation for the admirable manner in which their leading features were rendered. The triple lanterns and cinematograph apparatus were skilfully manipulated by Mr. Tom B. Mercer. The lecture throughout was of a highly successful character, the historical references adding greatly to the interest of the subject when the scenes of memorable events were shown and described. Professor Malden, who has been but seldom seen in London since his retirement from the public lecture platform, was present among the audience.



Butcher & Sons, Camera House, Farringdon Avenue, E.C.,

Have always such a multiplicity of novelties in their splendid showrooms that it is difficult to particularise. It is always our endeavour, however, to review only what we consider of interest to the greatest number of our subscribers, and in drawing our readers' attention to Butcher's "Empire" Cinematograph and Projection Lantern, we feel that we are fully carrying out our aim. The "Empire" is not a cheap machine in the ordinary acceptance of the term, but a really good and complete instrument at a fair price, and the firm contend that it contains more improvements than have been put into a cinematograph for years. The points worth noting are various, amongst them being the important fact that the machine can be supplied with or without projection fittings. All the parts are made of the best material, the frame and bearings being a solid iron casting with enamelled back. The film trap is all brass, with readily detachable springs. Every precaution is taken against any possibility of fire, as the film trap has full protection by a special heat shield, to which is fitted an automatic cut-off worked by gyroscopic movement. The body is large enough for arc lamp, and has side door and brass eye-piece with shutter, having also brass front with cell for condensers, and brass stage for carriers. The cinematograph objective is on brass mount, fitted in new form jacket with quick thread screw adjustment running parallel with the tube. The lantern objective is fitted on heavy brass standard with brass light shield. The eccentric adjustment permits a picture and half to be wound in either direction, and obviates necessity of spacing films when joining up. The many advantages can be only realised by actual examination. Interested readers and intending purchasers cannot do better than apply to Messrs. Butcher for their latest catalogue of lantern apparatus, which contains innumerable good lines for both amateur and professional.

The Cinematoscope—A Power.

MR. E. V. LUCAS, in an interesting article in "The Outlook," reviews the position which animated pictures have attained. He says:—"A fairly satisfactory proof that the cinematograph has conquered is to be found in its popularity, not only in the ordinary music halls, but among less enlightened audiences even than those which one finds there. At Barnet Fair, this year, I noticed that many of the old shows had given place to animated pictures, and at the Fete of the Invalides in Paris, a few weeks later, I observed the same development. In both cases the invented story, comic, tragic, or pathetic, was the staple; there were no royal processions, no conferments of the freedom of cities, no military manœuvres. Instead of taking the place of the illustrated paper, as the cinematograph at first did almost exclusively, and still does at the more pretentious halls, it was taking the place of the theatre. And for two very good reasons it was making the real theatrical booths look very foolish—one being that the pictured stories were bright and engrossing, involving the use of only one sense and never straining that (whereas in a stage-play in a booth one often fails to hear and sometimes to see at all); and the other that the body of the booth was in darkness, a favourable condition for those who attend fairs in couples, whether in England or France. Such knowledge of human nature as I have been able to pick up convinces me that there is a future for any theatre whose proceedings are conducted with spirit in darkness.

"There seems to be a free exchange of cinematoscope films between England and the Continent, for I have seen the same series in London, in Paris and in Amsterdam; and I have noticed invariably that, whereas the more expensive halls give farce only, at the poorer pathos is a necessary ingredient."

After reviewing various subjects, he asks: "Now how is this done? The tramp-hunt is obviously American; the husband-hunt, I fancy, is French. It follows that in some American towns and in some French towns the authorities had to be squared for a while in order that the cinematoscope's needs might be supplied. One of the first of these needs is deserted streets. I should guess that a very early hour was chosen for the operation, were it not that the light is then bad for photography. We must assume, then, that the ordinary conditions of life were by arrangement suspended to allow the cinematoscope free play. Has anyone, I wonder, ever been

a spectator of one of these dramas in the making? Are there observers who have such luck among social humours as Mr. Hudson, for example, has among birds and animals? Mr. Hudson, in an ordinary casual stroll across a common, sees strange occurrences of natural life that those of us who lack his "serendipity" seek and seek in vain. Are there Mr. Hudsons with the same fortune for the arrangements of the cinematoscope? I am not one. No cinematoscopic drama has ever been enacted beneath my eyes.

"And then, how does one induce good-looking young women to run fully dressed, and at top speed, through every kind of dishevelling obstacle, even to the wading of rivers? Will money do that in broad day? And how induce extraneous persons to abstain from participation? In this country the crowd would rapidly grow so great that the actors in the drama proper would be lost. The whole matter is trivial enough, and yet it is intriguing.

"I am interested, also, because the potentialities of the cinematoscope are so tremendous. It has not, I believe, yet begun to lie seriously. The fibs it now tells are trifling, such as the combining of pictures of half a dozen obscure runs to hounds to make one long series "With the Quorn" (as I once saw), and such innocent impostures; but there is a great field for really good falsification. With wigs and make-ups, and actors of intelligence, there is no historical meeting of crowned heads or powerful statesmen, in amity or anger, that could not be shown to a credulous and impressionable audience. A revolutionary committee might overturn a dynasty if such a series, carefully enough prepared, were among its ammunition. Think, for example, of realistic and therefore convincing pictures of the Tsar tearing up and stamping on an appeal from his people—how would they fill with renewed despair the simple peasantry who saw them, and of course, since they moved, believed in them? Or, in France, scenes of the desecration of the French flag in Germany—how might these inflame? These are extreme cases, but they show what I mean. Simpler would be imaginary interviews and treacheries for election purposes, or satirical scenes in the lives of great men such as Mr. G. B. Shaw or President Roosevelt. To these we shall certainly come ere long, and the arrangement of such dramas might be excellent fun. I feel fairly certain that the stage proper will never be burdened with any play of mine, but I should not at all mind trying my hand as a cinematoscope dramatist. I believe I could do that."



ITS USES AND ADVANTAGES AS AN ILLUMINANT.

THE changes in means of illumination of our houses, our streets, our public buildings, as well as tunnels, mines, and other places from which the light of day is permanently excluded, which have fixed themselves upon the

and the common dip tallow candle, feeble as was the light they emitted and frequently as they required the use of the snuffers or some similar attention to prevent its becoming feebler still, were regarded as affording sufficient illumina-



A VILLAGE LIGHTED BY ACETYLENE.

public attention during the lifetime of the present generation, have been not less numerous and remarkable than those which have affected other parts of our national and social life. Many of us recollect the days when the farthing rushlight

tion for a very large part of our rural and urban population, and when even the streets of our large towns had darkness rendered visible by oil lamps and other illuminants but little better or more efficient. Which of us who was accustomed to

railway travelling in our early days does not recollect the carriage lamp overhead with its dull reddish yellow flame and the pool of dull greenish looking oil accumulating at the bottom of the glass bowl, swaying and rolling with the motion of the train, like a troubled sea when it cannot rest? The introduction of gas as an illuminant was looked upon within living memory with a degree of contempt not unmingled with alarm, and regarded as a noxious and not slightly dangerous source of light, and as one of those modern innovations which were rapidly invading and spoiling the good old ways. The writer well remembers the early experiments in applying this method of illumination to the lighting of railway carriages, long after it had become firmly established in our houses, streets, and public buildings, and when the first gas lighted train was regarded as a curiosity, and generally, no doubt, as a welcome improvement upon the older systems.

The discovery, some years later, of the vast stores of mineral oil in North America and near the shores of the Caspian Sea, out of which so many fortunes were made almost in a moment—so that many a man who awoke in the morning poor, and almost without the common necessities and decencies of life, lay down at night rich almost beyond the dreams of avarice, because he had “struck ile”—led to other important modifications in the sources of illumination and of heating available and in common use. The great value of this material as an illuminant, and the special methods required for its advantageous use, led to the development of important chemical processes, and numerous improvements in the design and construction of lamps adapted to its combustion. Even now, the kerosene or mineral oil lamp and stove are the main sources of light and heat for domestic purposes amongst a very large portion of the population, especially those of the poorer classes, in this and other lands, while for the needs of those who require more brilliant illumination, gas continues to hold its own, though its province is rapidly being invaded and its ground occupied by the marvellous force of electricity, the practical uses of which are being so rapidly and extensively developed and extended day by day, and

which bids fair to supersede all the others in so many fields of industry as well as of domestic and social life.

Now all the means in common use for the production of artificial light or heat, with the exception of those due to electricity, from the rudest and most primitive form of lamp or candle used by the savage tribes of Polynesian islands, or of Arctic shores, to the most elaborate gaseliers and candelabra to be found in the houses of the wealthy and luxurious classes in the great cities of the world, and from the fire of the wanderer through the forest or over the prairie to the ornamental stove or fireplace of the drawing room or baronial hall, or the mighty furnace of the smelter of metals; all processes, in fact, which involve the combustion of some kind of fuel, depend for their success upon the heat evolved in one and the same chemical process—the combination of hydrogen or carbon, or both, with oxygen derived from the atmosphere which surrounds us. Even the vital heat of man and the animal creation has the same origin; the food, or that part of it which serves to develop heat, having the same general composition as the various kinds of fuel in use, such as wood, coal, oil, tallow, or gas derived from some one or other of them, and consisting of compounds of carbon and hydrogen more or less easily decomposed by heat and capable of combining with the oxygen which the atmosphere supplies in unlimited quantity, with the result that new compounds are formed and much heat force evolved in the process of their formation. All these compounds, which are almost boundless in number, and include almost everything which we commonly regard as capable of being burned, are known by the general name of hydro-carbons, and of them acetylene is the simplest in composition and the one perhaps most readily converted into others of its own class by the absorption of an additional atom or more of one of its ingredients, hydrogen or carbon, or some re-arrangement of its molecular composition.

Like many other products which either occur in nature or are readily obtained from substances which are familiar and plentiful, this gas and its properties seem to have been discovered almost by accident.

Carbon, common as it is, and many as

are the forms and modifications in which it occurs in our daily life, is in some respects one of the most intractable known to the chemist, having no known solvent, and existing in combination in numerous forms from which we can readily remove it, but to which we have hitherto been quite unable to restore it. Thus the cellulose of wood, probably the form of fuel first employed by man, is a hydro-carbon of definite chemical composition. The coal fields of our own and other countries consist of the same material, being the remains of vast forests flourishing at an early period of the world's history, and altered by exposure during long ages to pressure and other natural agencies working under the ground in which they were buried, yet still retaining unmistakable marks of vegetable structure, which we may obliterate and destroy by burning but cannot restore by re-uniting the several elements. Similarly the oil derived from the fatty parts of animals or from such fruits as the olive, were probably the first materials from which our predecessors obtained artificial light. There are also hydro-carbons whose composition we can ascertain, and which we can burn into products familiar to us all, but no means have yet been found capable of reproducing animal fat or vegetable oil.

It has, however, been found that carbon, refractory as it is, is capable, at the enormously high temperature which the electric furnace has enabled us to command, of entering into combinations with other substances such as no artificial process had previously been able to bring about, and the production of which had long been regarded as the special function of organic and other natural forces alone.

About thirty years since, lime and calcium oxide, and carbon in the form of coal or coke, were being heated together at a high temperature in the electric furnace devised by Sir William Siemens, when the crucibles used were found, after the process was complete, to contain a residue in the form of a dark grey cinder or slag, by no means agreeable to the sense of smell, which the lads employed in the factory discovered to yield, when wetted, an inflammable gas, burning with an intensely white flame, much to the amusement of the young experimenters. This grey

cinder, under the name of calcium carbide, has since acquired considerable commercial value as the source of acetylene gas, and is largely manufactured for that purpose.

Forty years earlier, in 1839, the same gas was described to the Royal Dublin Society by Professor Edward Davy, who obtained it by the action of water on potassium carbide, the carbon of the latter combining with the hydrogen of the water, while the extremely powerful affinity of the potassium for oxygen led to its combining with that constituent of the water to form potash.

But the value of potassium and its salts was too high to make such a method of preparing an illuminating gas commercially profitable, or giving the process any practical value beyond that of an instructive and interesting chemical experiment.

No further steps seem to have been taken to utilise the discovery till 1892, when an American named Wilson appears to have proposed a process for the manufacture of calcium carbide to be used as a source of the gas. In the same year a celebrated French chemist, Henri Moisson, obtained it as a residue or bye product in the course of reducing aluminium to the metallic state by the use of Siemens' electric furnace.

Shortly afterwards factories were established at Leeds and near the Falls of Foyers, in the North of Scotland, for the manufacture of calcium carbide, and since that time the manufacture has been extended, and the gas has come more largely into use year by year. It is indeed produced in almost every case when substances rich in carbon, are subjected to destructive distillation at high temperatures, being found among the bye products of gas works and chemical factories; hence a small quantity of acetylene is usually found as an impurity in coal gas as it issues from the retorts, tending doubtless to increase rather than reduce the illuminating power of the gas, but not rendering its combustion more pleasant or more wholesome if permitted to remain, the conditions required for the proper combustion of this gas differing in various ways from those suited to the ordinary carburetted hydrogen supplied by the gas companies.

The chemical composition of acetylene is C_2H_2 , i.e., two parts of carbon to two of hydrogen, and, as the former is twelve times as heavy as the latter, which is taken as the unit of atomic weight, its molecular weight is 26, the two parts of carbon weighing 12 each and those of hydrogen 1 each.

The composition of calcium carbide is CaC_2 , or one part of calcium, the metal of which lime is the oxide, to two parts of carbon, and its molecular weight is 64, or 40 for the one part of calcium and 24 for the two of carbon. It is extremely deliquescent, and rapidly attracts moisture from the atmosphere if exposed to it, hence it needs to be stored in hermetically sealed tins or drums. When it comes into contact with water both are decomposed with the production of great heat, the carbon of the one and the hydrogen of the other combining to form acetylene, and the oxygen of the water converting the calcium into lime. The heat evolved in this process is equal to 20,000 gram units for every 64 grams of calcium carbide used. These 64 grams contain, as already stated, 24 grams of carbon, and these, combining with 2 grams of hydrogen from the water, yield 26 grams of acetylene gas, which would measure, at a temperature of 0° Centigrade, and at the ordinary atmospheric pressure, 22.22 litres. 10 grams of calcium carbide at the same pressure and temperature would yield nearly $3\frac{1}{2}$ litres of acetylene.

This calculation assumes the purity of the calcium carbide, but as the commercial article is seldom or never quite pure, its yield will average about 80 per cent. of the above.

The illuminating value of acetylene is fully 15 times as great as that of ordinary coal gas, so that half a cubic foot of the former, consumed per hour, will yield a light equal to 25 standard candles, and this quantity of gas would be obtained by the decomposition of 4 ozs. of calcium carbide, which at present prices costs

about 3d. per lb., or slightly less in large quantities.

Acetylene gas, therefore, possesses the advantages of being easily prepared, yielding a very brilliant illumination, with a small consumption of material, and at a moderate cost.

It cannot, however, be advantageously stored in a gasometer as coal gas is for the supply to large areas, but is most conveniently used as produced, its storage for many hours in contact with water considerably affecting its illuminating value. Its great advantage lies perhaps in lighting small areas, such as private houses, public buildings, factories, and other places at a distance from large towns, or where for special reasons a private gas supply is needed, or where, as in many villages and country towns, coal gas is expensive and no convenient source of supply is at hand, while the residue after its manufacture, consisting of almost pure lime, can be utilised for building or other purposes.

In all cases of combustion, whether for the production of heat or light, the object in view is to supply the oxygen, whether alone or in the more usual form of atmospheric air, in such proportion as to ensure complete burning, so that nothing shall escape unused or unconsumed, either to be wasted or to become a nuisance or a source of mischief. This is specially the case with those substances which are rich in carbon, since that material, if suffered to escape unconsumed, takes the form of soot, often accompanied by a very pungent odour. We are all familiar with the many ills which are due to smoky chimneys, and the still more clinging and soiling deposit which finds its way into our rooms when a mineral oil lamp or stove is permitted to smoke. Not loss of fuel alone, but serious mischief and annoyance must result, and a state of affairs ensue which, in the words of the late popular and sententious writer, "A.K.H.B.", "cannot go on."

(To be continued.)



ACCESSORIES IN LANTERN SLIDE MAKING.

BY TICKNER EDWARDS.

TO most slide-makers, professional and amateur alike, the reflection must have often occurred, that whereas lantern-plates—and notably those of the Ilford brand—seem to have reached a point of excellence hardly to be improved upon, the various accessories needful in the finishing of a slide are still behind the times in many important particulars.

The difficulty in procuring really good cover-glasses is usually the first stumbling-block in the way of the slide-maker, who takes his work in earnest.

In the experience of most users of the Ilford Special or Alpha plate, it is the rarest thing in the world to find air-bubbles, or even the smallest blemish in the glass used. Many gross of these plates have passed through my hands during recent years; and I cannot remember a single case of a slide having to be condemned through any fault in the glass selected. But in looking over cover-glasses, I have sometimes had to discard as many as thirty per cent., either on account of air-bubbles, eye-sores, or "fishes," variation in gauge, or inaccuracy in cutting.

The average Ilford amateur finds it rather difficult to understand why cover-glasses generally are not free from these defects, and often decides to obtain his cover-glasses from Ilford, although they are rather more costly, in order to escape these vexatious troubles.

The ready-cut masks are also, as a rule, far from meeting the ordinary requirements of slide-makers. Most of the cushion, oval, and dome-shaped masks are useless to the lantern-pictorialist. The rectangular, except in certain rare instances, is the only shape admissible in serious art-slide work; and what lantern picture makers want is a very full range of masks with apertures of this kind in greatly varying proportions.

It is by no means necessary to cut masks rigidly to the size of the plate. A quarter-inch margin all round would often prove very useful. Ever so slight an adjustment of the mask horizontally or vertically, sometimes results in a great improvement in the composition of a picture; and the over-lapping paper can easily be removed with a sharp penknife, when the position of the mask has been determined.

The question of how best to bind our slides is one that has always been open to controversy. In my opinion the four-piece system is the best. These single pieces—cut slightly less than three-and-a-quarter inches long to allow for stretching—are easy enough to handle. The trouble with them is, however, that the paper, of which most are made, is neither thin enough nor tough enough. Both with masks and binders an extremely thin, opaque, tough paper is a *sine qua non*. The ordinary needle-paper, so commonly used, is in many ways unsatisfactory, and ought to be replaced by something better.

While on the subject of slide-binding, the want of a really good effective clamp may be mentioned. The grips of most clamp-holders are not nearly broad enough. So long as enough of the glass remains uncovered to allow of the binder being applied, the larger the felt-shod discs are made, the better.

Almost all the side-binding clamps at present sold are too weak in the arms. The glasses require to be very firmly held together, in order that all air may be driven out before the binding-material is applied; and the necessary screwing-up often results in the breakage of the cast iron brackets.

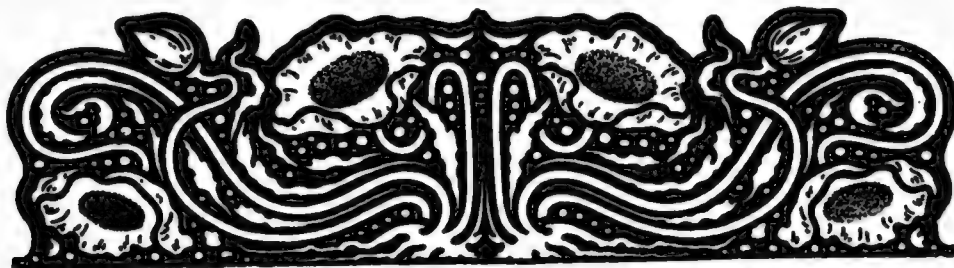
Then the clamp should be simply a holder, not a support. The edges of the slide should rest on the table; and the clamp—beyond its primary use of gripping the glasses together—should serve only to keep the slide in a vertical position during binding. The kind of clamp which screws on to the table, or stands on a flat foot, is very inconvenient in practice.

A plan which I adopted long ago in marking and spotting slides, is to affix small triangles of fine white paper to the two upper corners of the cover-glass. These are easily-cut from ready gummed paper, with an ordinary pair of scissors. On the left-hand spot a large letter is plainly written or printed, and on the right-hand spot a large number. No other mark, title, or writing of any kind appears on the slide; the letter and number being sufficient to identify the picture with the full title and description entered in a book specially reserved for that purpose.—*Photographic Scraps*.



HOW TO CLEAN A LENS.

Custom teaches us that glass will stand any amount of washing and wiping without injury, but the lesson is wrong. It may hold good of tumblers and beer bottles, but when we come to the finer qualities of glass of which lenses are made, and to the more highly-polished and more accurately finished surfaces which they must possess, we find that it is hardly an exaggeration to say that we cannot touch the surface of the glass without permanently affecting it. Certainly a degree of roughness which is habitual in the cleansing of table glass would spell ruin to a lens in a very little while. Yet the writer has seen a photographer breathe on the glass of a costly anastigmat, and give it a rub with the corner of a focussing cloth with all the delicacy and care of a child cleaning a slate—but no more. Only two kinds of impurities should need removal from the lens—dust and grease. Dust, and under this head we might include the dirt which may appear after a lens has got wet with rain or sea water, is best got rid of by a very gentle wipe with a piece of clean, washed cambric. Nothing is better for this purpose than an old handkerchief, washed out to remove laundry chemicals, and dried. Part of it should be dampened with clean water, and the lens dabbed. In this way harsh particles of dust, and much dust is nothing but broken flint, are picked off instead of being ground round on the glass by rubbing. A gentle wipe with a dry part of the cloth completes the operation. If a lens has got greasy from finger marks or otherwise, a little rectified benzine or ether may be applied to the handkerchief. Its surface must not be allowed to get quite wet with either, because it might work into the cell and affect the cementing. The great thing is to remember that glass is easily injurable, and act accordingly.



THE MONTH'S NEW FILMS.

A DECIDED improvement in the output of of films is to be reported this month. The opening of Parliament, the funeral of the King of Denmark, and the launch of the "Natal" and "Dreadnought" have proved profitable subjects, and the usual dramatic and humorous items have been considerably added to, whilst educational films have received deserved attention.



GAUMONT & Co. are showing at the Hippodrome a capital skit on Continental army life, entitled "Army life as it might be." This humorous film should be in large demand, containing as it does all the essentials for thorough hearty laughter. "The great jewel robbery" is a film of a sensational character that is being shown with success at the Palace theatre. As the title denotes, the subject deals with a thrilling jewel robbery on a unique plan, and after various vicissitudes the thieves are finally run to earth. Another film, shown at the same house, entitled "Winter bathing," is of a novel character, showing enthusiasts in an ice-bound lake.



GAUMONT's "Opening of Parliament" is having a good run, being shown at the Empire, Palace, Lyceum, Oxford, Holborn Empire, Bedford, Royal Albert, Canning Town, and numerous provincial halls.



THE CHARLES URBAN TRADING CO. have been showing during the month, at the Alhambra, a range of new subjects, including "Sherlock Holmes: or held to ransom," an episode in seventeen scenes, dealing with one of the most startling of Sir Conan Doyle's marvellous conceptions, culled from the series of adventures of the bandits who designate

themselves "The Sign of Four." The detail of this film is wonderful, and it is realistic to the highest degree. "A voyage to South America" depicts the main incidents on the s.s. "Clyde," from Southampton to Buenos Ayres, with views of the ports touched en route, and gives all the main incidents in a voyage on board of a big steam-ship. "Uruguay to the Andes." From "Buenos Ayres to Chili" is another similar film full of interest, and is crammed with incidents enough to satisfy the most omnivorous audience. "The story of the Moth and Butterfly," another of this firm's well-known natural history series, is amongst the best yet issued, and is as full of interest to the ordinary spectator as to the student. Amongst others we would mention favorably "The Carnival of Nice," "International Curling at Kandersteg, Switzerland," and a new series of winter scenes, which have delighted audiences during the month. All the films are well up to this firm's usual high standard.



ANIMATED pictures, showing various incidents of the launching of the new leviathan battleship "The Dreadnought," were exhibited on the bioscope at the Palace Theatre, on the evening of the event.



A SPECIAL series of pictures of Kempton Park races were taken by Raymond and Co., for exhibition at the Lyceum.



WE were pleased to see that the Lord High Chamberlain recognised the importance the living picture man now holds as an item not to be despised at all great state functions. He granted special facilities in connection with

the opening of Parliament, and interesting films were produced, illustrating the Yeomen of the Guard completing their tour of inspection and the members entering the precincts of the House.



Mr. ROBERT W. PAUL's latest picture has many novel and laughable situations. It is called "The Doctored Beer, or how the copper was copped." The scene opens showing the window of a bar parlour. Two burglars cautiously come round a corner and, seeing that the coast is clear, one examines the door and the other the window. The man at the window calls his mate, who forces same quietly open, while the other keeps a look out. A policeman is seen approaching and one burglar rushes off while the other, a crafty man at cracking cribs, is not to be flurried. He takes out of his bag a bottle of drugged beer, which he places on the ledge as a temptation to the approaching policeman. The constable's vigilance causes him to see the bottle, from which he proceeds to drink. From a safe distance the two men note that their bait has caught, as the constable feels the effect of the drug and staggering about suddenly falls senseless. Finding him unconscious, one of the burglars beckons his mate and they immediately open the window. One jumps inside while the other keeps a further look-out, until presently the window opens and the man inside hands out the valuables, and they make off as quickly as they can after putting some empty bottles round the unconscious man. They have evidently disturbed the landlady, who rushes to the window and screams out "police," an inspector and another constable approaching to her aid. She tells them that burglars have entered the house, and the inspector sends his man after them, but seeing the other constable on the ground with the bottles around is suspicious that he is the guilty party, so arouses him roughly. In hurried words, the man explains what has happened and they follow.

The next scene shows the two constables and the inspector chasing the burglars. The latter, out of breath, see two house-doors ajar, and one rushes into each house. The police do not notice this. The fat policeman coming along and seeing two boys playing marbles asks them if they have seen two men. One of them volunteers the information that a man has entered each house, which information he rewards by cuffing one and kicking the other. Knocking at each door, he stands waiting with his back to the wall between the two doors thinking how beautifully he will make a capture. The two burglars, however, appear at the windows above and cautiously looking out make signs to each other and point down to the policeman. Suddenly both doors fly open and meet, thus imprisoning the policeman. Lashing them together, the burglars throw over the top a scuttle of coals, bucket of water and other things. Then seizing their swag they make off. The inspector and second constable again enter looking very worried at having lost all track when suddenly they see a hand above the doors. Ordering the constable to undo the doors, to their utter amazement the imprisoned and begrimed half-dead constable falls out. The enraged inspector gives him a good rating, pulls off his armlet and marches him off much to the delight of the two boys and others who have been collected by the unseemly noise.



CRICKS & SHARP must by now have a very interesting list of films, as each month since they started they have added novelties of an exceptional character. Their latest, "The Life of a Trotting Horse," although savouring of a title we have previously reviewed, should be in demand by exhibitors at the Halls. There are six divisions:—As a foal, breaking in, jogging, speeding, harnessing-up, and the race, all clear and full of life, and the total length is 250 feet.





LECTURES WANTED.

SIR,—Can you give a list in your excellent journal of complete lectures illustrating various phases of industries, such as “Mustard, from plant to pot,” or “The making of a table cloth.” I want subjects such as these suitable for school use, but should also be glad if you can give a list of films of a similar nature, where they can be hired, and what it costs for say a series of a dozen shows including operator, films, and apparatus. I need these for a literary society, and have difficulty in obtaining what I want.—Yours, &c., J. B. MOREHOUSE, Cambridge.

[Our correspondent gives us a large order. With reference to the slides, he should be able to obtain all he needs from manufacturers' catalogues. Regarding the films, etc., I will reply fully next month.—ED.]



Mr. T. C. FIELD writes us from Bow Palace with reference to a paragraph which appeared in our last number, that he did not admit dangers connected with the exhibition of living pictures. He states that he has been an operator for the last 8 years and, during that period, has not in any single instance had help. We regret we cannot print his letter.

Answers.

HUBEN TILEFF (Bulgaria).—Messrs. W. C. Hughes & Co. have sent us your letter of January 23rd, and we forwarded it to Mr. J. Hay Taylor, who writes to us as follows:—“Up till early in 1896 the Magic Lantern Journal had offices at 56, Chancery Lane, and the advertisement spoken of appeared in ‘The Art of Projection’ published in 1893. I disposed of the journal about this date (1896) to a Limited Company, who published it at another address. I have had no letter from Mr. Tileff, and it is probably on its way back to the sender through the dead letter office, the address being ten years old and I unknown there now.”

REV. A. WASHINGTON PALMER, Tintern Rectory. —Many thanks for your reply *re* “Meeting Ten Years Ago.” You will find another correspondent supplies us with information, which we print on another page.

JAMES B. WALCH, Leeds.—The meeting was held on February 2nd, but only five were present, although twenty were invited. We, however, believe good will ultimately result.

R. K. BONINE, Essex Avenue, Orange New Jersey. —We can supply all back numbers of the present series, but we suggest you have the bound volume, price 3s. 6d. You can obtain the book you require, gratuitously, from Messrs. Ross Ltd. No. 3, North Side, Clapham Common, S.W.



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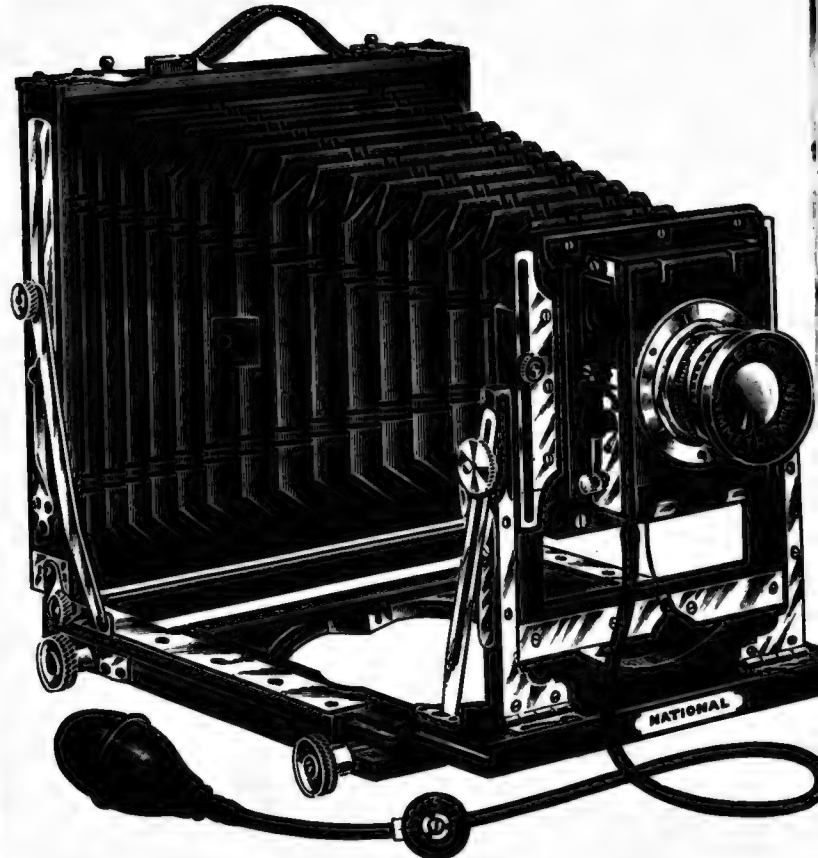
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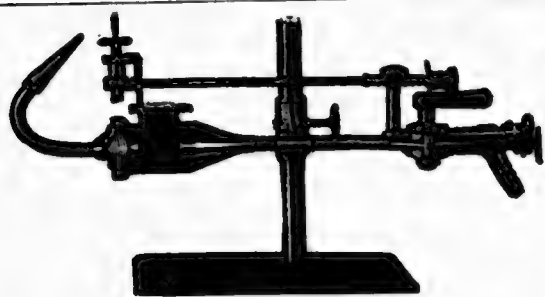
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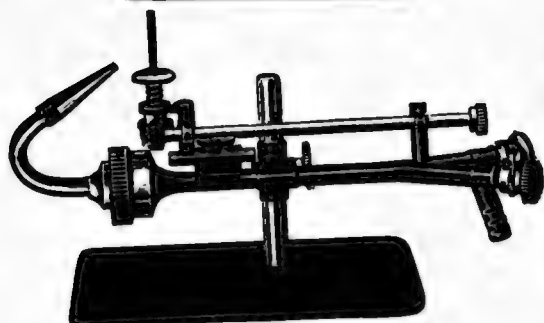
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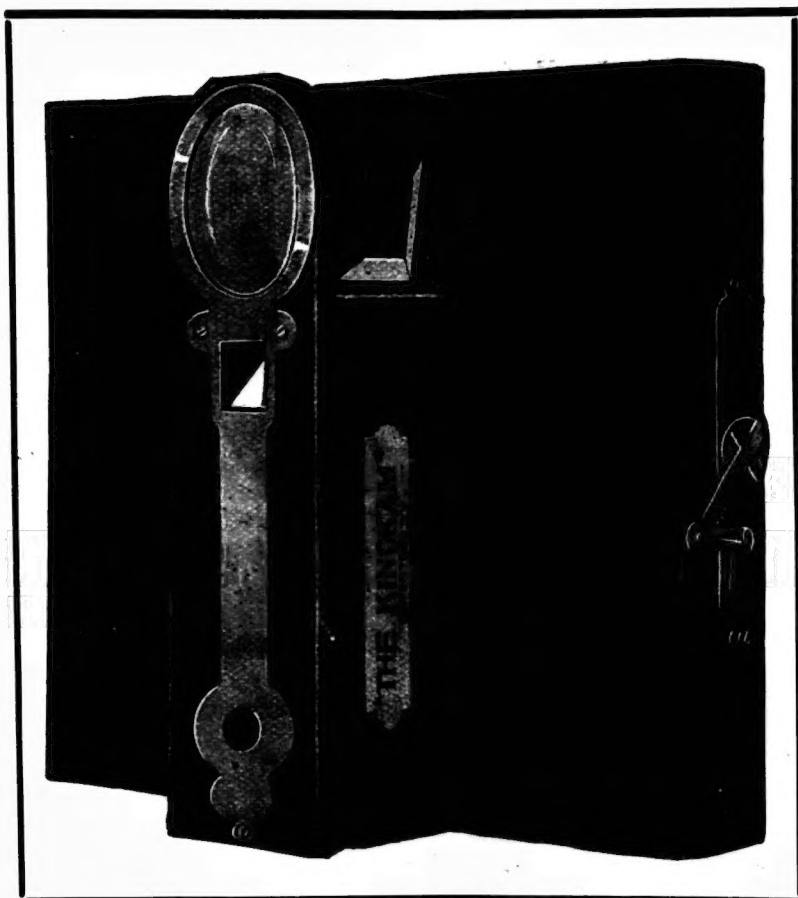
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